

ATTACHMENT 5. WORK PLAN

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Background

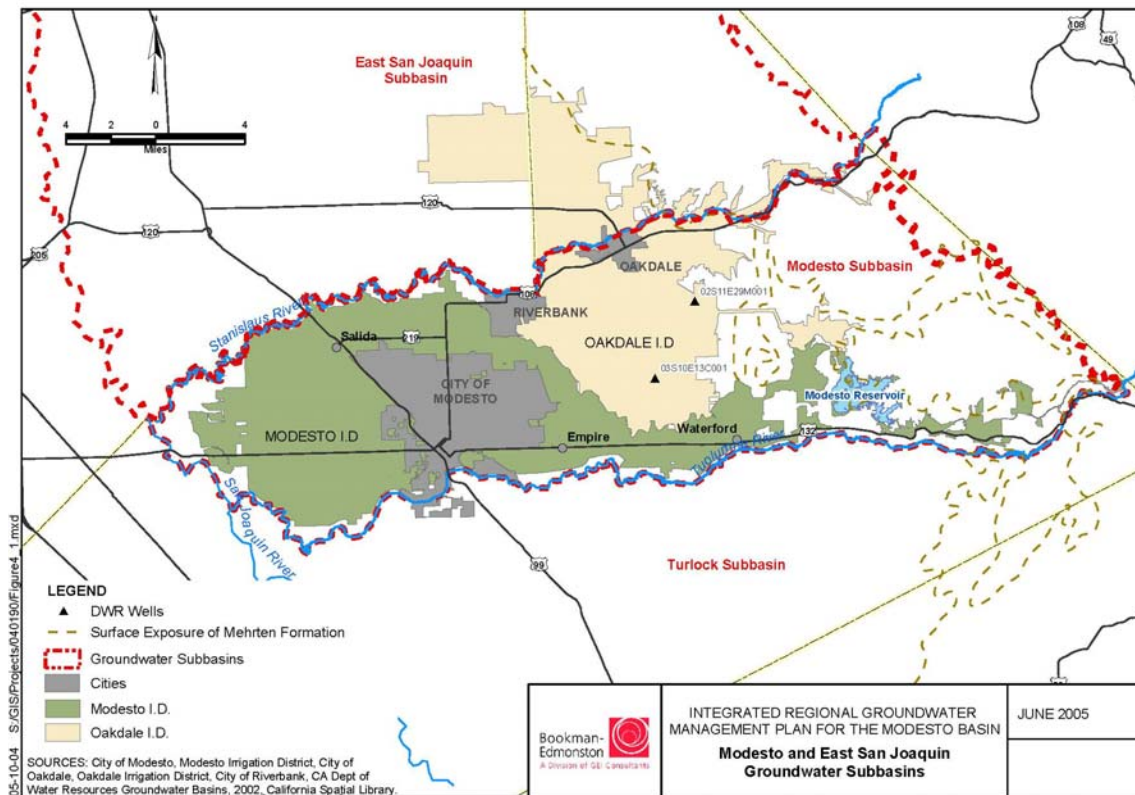
The City of Modesto (City), in cooperation with the Stanislaus and Tuolumne Rivers Groundwater Basin Association (STRGBA), is submitting this 2012 Local Groundwater Assistance (LGA) Grant Application in order to obtain grant funds from the California Department of Water Resources (DWR) to conduct the Modesto Groundwater Basin Characterization and Recharge Study (Project), resulting in the preparation of an Integrated Groundwater Management and Augmentation Plan (IGMAP). As noted in Attachment 4, Project Description, the proposed Project was developed specifically to identify areas in the Modesto Groundwater Subbasin where either direct and/or indirect groundwater augmentation may occur to both aid in maintaining basin groundwater levels and to provide for storage of seasonally-available surplus treated surface water (obtained via existing infrastructure from the Modesto Regional Water Treatment Plant [MRWTP] as supplied under agreements with the Modesto Irrigation District [MID]) in the subsurface. This Project is being proposed by the City, which overlies both the Modesto and Turlock Groundwater Subbasins and is a member of the STRGBA, the Modesto Subbasin management entity. Specifically, the purpose of this Project is three-fold:

- First, to develop a comprehensive characterization of the basin hydrogeology, especially the deeper aquifers where domestic (potable) water is typically extracted via municipal production wells, with a focus on future augmentation of these aquifers;
- Second, to identify future studies and projects that can be implemented to further the development of a groundwater banking, augmentation and management program for the Modesto Subbasin; and

- Third, to analyze the feasibility of pursuing a pilot study and subsequent demonstration project regarding potential groundwater recharge in the basin.

This Project will contribute to a better understanding of the location, quantity, and quality of the groundwater within the Modesto Subbasin (which is the principal source of domestic water in the region) and will help to determine which strata would be good candidates for use in a potential groundwater banking program. With the Cities' dependency on groundwater as a principal water supply source, this understanding will, in turn, improve the ability to effectively manage the groundwater subbasin, an essential element in the region's ability to adapt to climate change in the future.

Figure 1: Modesto Subbasin



Completion of the proposed Project (i.e. preparation of the IGMAP) will provide key data necessary to develop follow-on studies and projects that will:

- Correct existing supply deficiencies by providing the water needed to meet existing and future demands (developing new wells has been problematic due to groundwater quality issues);
- Avoid further over-drafting of the groundwater supply (future groundwater use is anticipated to exceed natural recharge);
- Improve water quality;
- Increase basin reliability under changing climate conditions; and

- Create operational flexibility by improving the adaptability of the region to changing hydrologic conditions.

These studies and projects will then be submitted for inclusion in the East Stanislaus Integrated Regional Water Management Plan (ESIRWMP), currently under development, and will be incorporated in updates to the *Integrated Regional Groundwater Management Plan for the Modesto Subbasin* (IRGMP). As noted in Attachment 4, this proposed Project is consistent with both the IRGMP and the East Stanislaus IRWM planning regional goals and objectives. Specifically, the IRGMP includes “Maintain Groundwater Levels”, “Control Degradation of Groundwater Quality”, and “Protect Against Potential Inelastic Land Surface Subsidence” as three of its overall Basin Management Objectives (BMOs). The following are some of the specific management area BMOs documented in the IRGMP:

- Correct existing supply deficiencies by providing the water needed to meet demands;
- Identification and mapping of the basin’s natural recharge areas;
- Protection of groundwater recharge areas;
- Development of a water budget to determine if the basin is in overdraft and, if so, to determine the amount of overdraft;
- Feasibility evaluation of artificial recharge projects;
- In-lieu recharge through importation of a surface water supply to areas currently relying on groundwater;
- Maintaining groundwater levels to control the movement of poor quality water into and within the basin;
- Conducting a detailed geologic assessment of the basin to identify sources of poor water quality; and
- Continuing to support the development of in-lieu recharge projects in urban areas with poor water quality.

Implementation of the proposed Project will provide information necessary to identify and develop studies and projects that, when implemented, will support these BMOs, and will provide recommendations that can be implemented both in the short- and long-term to achieve these BMOs. Studies and projects compiled in the IGMAP will also contribute directly to the following ESIRWMP regional water supply goal and its associated objectives:

- To protect existing water supplies and water rights, and improve regional water supply reliability.
 - Promoting the use of groundwater storage and conjunctive use options to reduce groundwater overdraft; and
 - Supporting monitoring and research to improve understanding of water supplies and needs.

Preparation of the IGMAP is consistent with these objectives and will result in the development of projects that can be included in the ESIRWMP to help achieve these goals and objectives.

Completion of the IGMAP is a key step in understanding Modesto Subbasin hydrodynamics for development of a long-term groundwater banking, conjunctive use, and basin management program. Seven tasks are required to implement the Project and prepare the IGMAP. The following summarizes these tasks, while more detail is provided in the Scope of Services.

- Task 1: Grant Administration, Project Management and Coordination** – this task covers needed administration activities to meet the terms of the funding agreement and to provide for coordination between the City, the STRGBA and any other participating stakeholders.
- Task 2: Groundwater Data Collection and Analysis** – existing data will be collected under this task and analyzed to identify data gaps. Data will be collected from local, state and federal agencies using existing means of communications available to the City of Modesto, such as its membership in the STRGBA and its coordination with the United State Geological Survey (USGS) in basin studies.
- Task 3: Identify Basin Needs and Develop Basin-wide Vision** – this task will result in the identification of the future groundwater needs from the Modesto Subbasin, and a basin-wide vision for future groundwater augmentation and/or management projects.
- Task 4: Develop Methodology to Prioritize Projects** – under this task, a method will be developed to prioritize studies, projects, and programs developed under Task 6 to provide a focused list of recommendations for near-term implementation.
- Task 5: Aquifer Hydrogeologic Characterization and Aquifer Recharge Analysis** – data collected under Task 2 will be analyzed with an eye towards development of groundwater augmentation and conjunctive use projects. This task will result in a conceptual model that will be used to facilitate the remaining tasks and future associated projects.
- Task 6: Project and Opportunity Identification and Prioritization** – a list of potential future studies, projects and programs will be identified and described as part of this task. This list will then be prioritized using the methodology developed under Task 4.
- Task 7: Prepare Integrated Groundwater Management and Augmentation Plan** – the results of Tasks 2 through 6 will be compiled and presented in the IGMAP. This document will be available for review by interested stakeholders via the STRGBA website and the East Stanislaus IRWM planning website.

As this Project is a study being implemented for information purposes, no environmental documentation or permitting will be required. Subsequent projects and studies resulting from implementation of this Project may likely require future environmental analysis on their individual merits. Additionally, access to private property will not be required for implementation of this proposed Project.

Scope of Services

The following is the proposed scope of services that would be conducted under this 2012 LGA grant program. The budget and schedule associated with this Project are included in Attachments 6 and 7, respectively.

In implementing this Project, the City has been designated by the STRGBA as the Grant Administrator and contracting agency with DWR and will therefore manage the consulting team(s) implementing the following scope of work, report progress to the STRGBA, and follow all of the LGA grant implementation guidelines.

Task 1: Grant Administration, Project Management and Coordination

This task will provide for grant administration, contract management activities, and coordination between the City, the contracted consultant(s), the STRGBA and participating stakeholders. Effective communication will be essential throughout task implementation to ensure a thorough transfer of information, timely project implementation, and consistency of understanding as it relates to development of basin-wide goals and results for inclusion in the IGMAP and coordination with the *Integrated Regional Groundwater Management Plan for the Modesto Subbasin* (Bookman-Edmonston, 2005) and the East Stanislaus Integrated Regional Water Management Plan (currently under preparation). Completion of the deliverables specified for each task will be the primary manner in which progress and performance of this Project will be measured.

Of the four subtasks described below, please note that Subtasks 1.1 and 1.4 are considered to be direct project administration, whereas Subtasks 1.2 and 1.3 are required for overall project coordination and implementation and are therefore not considered to be direct project administration.

Subtask 1.1: LGA Funding Agreement Administration

Subtask 1.1 encompasses all direct program and funding agreement administration activities that will be required for successful execution and implementation of a funding agreement between the City and DWR. Work to be completed under this subtask includes, but is not limited to:

- Coordination of funding agreement execution
- Ongoing communications with DWR
- Maintenance of project files as it relates to funding agreement implementation
- Project close-out activities, including preparation of files for future storage

Subtask 1.1 Deliverables: Executed funding agreement with DWR; Monthly progress reports; Claim submittals to DWR.

Subtask 1.2: Project Implementation Coordination

The purpose of this subtask is to maximize the benefits of the Project deliverables and facilitate communication and coordination amongst the STRGBA and participating stakeholders. The City will lead project implementation, and as such, recognizes that communication and coordination among project team members, the City, and participating stakeholders are key factors in successful project completion. To achieve this, the City will conduct a Project kickoff meeting, and will follow that with regular communications.

A kickoff meeting will be held to discuss and coordinate, among other things, the gathering of pertinent available data, local monitoring practices, lines of communication and management, and the clarifying of the Project's goals and objectives. Central to the meeting will be a discussion of the Project's expected outcome; specifically, the format, content, and development of the IGMAP.

Regular communication is critical to ensuring smooth project implementation. This communication will especially be important during initial Project phases, during data collection and analysis, and in developing the basin-wide vision for the IGMAP. During project implementation, regular project team meetings will be held via conference call, approximately bi-weekly, to coordinate activities, maximize efficiency, and address issues and provide frequent update on activities. Monthly updates will also be provided via email and through the STRGBA and ESIRWMP websites, documenting progress towards project completion.

A comprehensive quality assurance/quality control (QA/QC) program will also be implemented during the Project to help assure accuracy of deliverables. Staff from within the consultant's organization and the City will conduct reviews of key documents under the direction of the City's Project Manager. Specifically, the following will be conducted:

- Review all deliverables to ensure they are objective, accurate, concise, and complete.
- Confirm the Project objectives and requirements have been met and/or managed through the Project delivery.
- Confirm the work has been completed, consistent with the standards of professional care.

In doing so, the City will coordinate the distribution of documents for external QA/QC review, with all responses sent to the City. Additionally, the City may coordinate with members of the STRGBA and participating stakeholders during the QA/QC review process to expedite review and commenting. Finally, as previously noted, completion of the deliverables specified for each task will be the primary manner in which progress and performance of this Project will be measured

Subtask 1.2 Deliverables: Kickoff meeting agenda and minutes; Progress meeting agenda and minutes; Quality Assurance and Quality Control records and documentation (e.g. comment response log).

Subtask 1.3: Consultant Contract Administration

The City will administer, sign, and track any contracts with consultants or other agencies to complete the other tasks included in this grant application. All funds relating to this grant application and the tasks contained herein will be managed by the City. Contract administration includes invoice management (consultants and subconsultants), tracking task progress, ensuring that tasks are completed on time and within budget, reporting, contract management, claim preparation and submittal, and any other tasks necessary for administering the grant.

Subtask 1.3 Deliverables: Executed contract(s) with consultant(s); Consultant invoices and progress reports.

Subtask 1.4: Quarterly and Final Reporting

As will be required by the executed funding agreement, the City's project manager will prepare and submit to DWR quarterly reports documenting work completed during the quarter, budget expenditures, schedule updates, invoicing and accounts receivable, and project performance. The quarterly reports will also identify any potential problems that may be foreseen in completion of the proposed scope of work.

Following completion of the proposed scope of work, the City's project manager will prepare and submit a Final Report, as required by the funding agreement. It is anticipated that this report will summarize the work that was conducted, document any outreach that was completed as part of the project, and provide a summary of the project effectiveness and contribution towards preparation of the IGMAP and meeting the Project's goals.

The quarterly reports may include, but are not limited to, the following information:

1. Time period covered by the request
2. Description of activities since the previous report
3. Status of the project relative to the schedule
4. Estimated percentage of work completed

5. Records of expenditures
6. Percentages of State and total funding expended to date
7. Key issues that need to be resolved

The City will keep all records and documents pertaining to the Project for a minimum of three years after project completion.

Subtask 1.4 Deliverables: Quarterly Reports (7 reports) and one Final Report.

Task 2: Groundwater Data Collection and Analysis

Groundwater-related information and data will be identified, collected, and analyzed under this task, including information regarding current and projected future groundwater use, groundwater elevations and water quality.

Prior to the kickoff meeting described in Task 1, a list of identified available data, reports, etc. will be developed and presented to the STRGBA and interested stakeholders via email, who will then, in turn, supplement the list with any additional studies or information they may know of. This list will identify which data the Consultant has compiled, and will result in data requests for project participants.

It is anticipated that the *Modesto Subbasin Integrated Regional Groundwater Management Plan* (Bookman Edmonston, June 2005) and the USGS publication *Hydrogeologic Characterization of the Modesto Area, San Joaquin Valley, California* (USGS Scientific Investigations Report 2004-5232) will form the basis of information for this task. However, in order to conduct a comprehensive analysis and prepare associated maps of potential recharge opportunities and areas of water quality concerns, the following types of data will be collected to augment information contained in those studies:

- Hydrology
- Hydrogeology
- Soil group texture/type
- Existing grade slopes
- Corcoran clay spatial extent
- Existing land uses
- Water quality
- Depth to groundwater
- Existing studies related to recharge areas
- Existing studies regarding anticipate impacts of climate change on regional hydrology

The aforementioned studies will therefore be augmented with more recent studies such as the 2008 USGS study entitled *Hydrogeology, Water Chemistry and Factors Affecting the Transport of Contaminants in the Zone of Contribution of a Public Supply Well in Modesto, Eastern San Joaquin Valley, California* (USGS Scientific Investigations Report 2008-5156) and the 2009 USGS study entitled *Assessing the Vulnerability of Public-Supply Wells to Contamination: Central Valley Aquifer System near Modesto, California* (USGS Fact Sheet 2009-3036), as well as the USGS groundwater flow model developed for the basin. These reports, and other published data and information obtained from the USGS and participating stakeholders, will be used to conduct a refined hydrologic/ hydrogeologic characterization of the study area, focusing on the best areas for implementation of groundwater augmentation and/or banking. The characterization effort will also include a general evaluation of any potential water quality concerns related to the examined

sources and aquifers. After data compilation and review is complete, a Data Needs Assessment Technical Memorandum (TM) will be prepared to identify major data gaps and to direct the development of possible future projects to fill those gaps. The Data Needs Assessment TM will be presented to the STRGBA and other interested stakeholders for review and comment prior to finalization and posting on the STRGBA and ESIRWMP websites.

At present, groundwater elevations in the Modesto Subbasin are monitored on a local basis by individual agencies and on a subbasin-basis by the groundwater management agencies (such as the STRGBA). These monitoring programs will be re-evaluated in a regional context and data gaps involving spatial or vertical distribution will be identified. Recommendations for addressing these data gaps will be included in the Data Needs Assessment TM produced for this task. This TM may include provisions or justifications for persistence of a data gap (e.g., lack of suitable monitoring wells) and provide suggested recommendations for additional projects to be included in the IGMAP that, when implemented, may fill these gaps.

In summary, it is anticipated that a substantial amount of related work has been completed that can be melded into a single picture and evaluated in the context of direct and indirect groundwater augmentation and banking. All data collected and used to achieve this goal will be evaluated for consistency and completeness. In the absence of any of the above data, alternative data may be recommended for collection in order to conduct an understandable analysis. The STRGBA and other agencies will provide the consultant with electronic versions of the files whenever possible.

Task 2 Deliverables: Data Requests; Draft and Final Data Needs Assessment TM.

Task 3: Identify Basin Needs and Develop Basin-wide Vision

After reviewing the existing groundwater-related documents in Task 2, a workshop will be conducted with the STRGBA, participating stakeholders, and the local communities overlying the Modesto Subbasin to better understand and document existing groundwater management needs, to identify areas with ongoing water quality problems, and to provide insight in regards to groundwater augmentation goals. Supplemental interviews will be conducted via telephone, as needed, with staff from municipalities and other local agencies/groups in order to understand these needs wishes that may not be adequately addressed in existing planning documents or fully addressed in the workshop. Climate change impacts on the region's hydrology will be considered as a factor in identification of the basin's needs.

Following development of the basin-wide needs assessment, work will continue with the STRGBA and interested stakeholders in the region to develop a vision for what, how, and where multi-benefit groundwater management and groundwater augmentation projects should be developed in response to the identified needs and opportunities. In support of this vision development, examples of similar goals, objectives and projects local to the Central Valley and in regions with similar features elsewhere in Northern and Southern California will be identified and shared. The result of this effort will be a basin-wide groundwater augmentation and management vision, along with the goals and objectives to be achieved to obtain that vision.

Task 3 Deliverables: Identification of basin-wide groundwater management needs; Vision for multi-benefit groundwater management activities.

Task 4: Develop Methodology to Prioritize Projects

Working with the STRGBA and interested stakeholders, a methodology will be developed to catalog and prioritize potential groundwater augmentation projects to be considered for inclusion in the IGMAP. This methodology will consider issues specific to groundwater management augmentation and give highest priority to projects that provide groundwater management benefits while recharging groundwater and protecting water quality. If deemed feasible, a ranking system will be developed for evaluating potential recharge locations in light of providing the groundwater management benefits such that the prioritization can be applied using GIS. Under such a method, the features of each dataset (i.e., proximity to groundwater recharge areas) will be ranked and weighted using ranking and weighing criteria developed in coordination with the STRGBA and stakeholders. The resulting methodology will help prioritize projects designed specifically to meet groundwater management augmentation objectives, and may also serve as the basis for future grant applications and/or local funding opportunities for programs focused solely on this subject.

Task 4 Deliverables: Draft and final TM of methodology to prioritize projects and opportunities.

Task 5: Aquifer Hydrogeologic Characterization and Aquifer Recharge Analysis

Using the data collected in Task 2, along with the basin-wide vision for groundwater management and augmentation, a conceptual (non-numerical) model of Modesto Groundwater Subbasin augmentation and management will be prepared. This model will describe how and where the groundwater subbasin is currently being recharged, primary groundwater flow pathways, summarize groundwater extractions, and describe significant areas of water quality degradation. As part of this model development, the water balance developed for the USGS MODFLOW model will be evaluated, considering projected future development and climate change impacts. (However, no numerical modeling is currently planned as part of this effort.) This conceptual model will form the basis for developing and recommending conceptual-level artificial and managed recharge and banking projects for consideration and inclusion in the IGMAP.

Once the conceptual model has been completed, an aquifer recharge analysis will be performed to identify the best means for recharging the underlying groundwater subbasin. Hydrologic parameters utilized to quantify recharge conditions may include, but are not limited to, the following:

- **Hydrologic soils group:** Hydrologic soils group shows the capability of near-surface soils to infiltrate water. The classification of the hydrologic soil groups is provided by the United States Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS). Typically, areas identified as having a small runoff potential (i.e., the highest capacity for infiltration) through areas identified as having a great runoff potential would be mapped. Any unmapped areas may be estimated using nearby hydrologic soils group classifications.
- **Soil Texture:** Soil texture at depth identifies areas that have both an ability to store water and to transmit water due to large grain sizes, such as sands and gravels.
- **Surface Slope:** Areas with significant slope result in more rainfall running off to streams and rivers rather than infiltrating to groundwater.
- **Corcoran Clay:** The Corcoran Clay layer is a regional aquitard that typically limits the vertical migration of water in the subbasin; thus, the Corcoran Clay layer would inhibit passive surface recharge beyond a certain depth. The location, extent and depth of this aquitard will affect the managed groundwater recharge projects recommended.
- **Existing Land Use:** Urban development, as shown through land use patterns, has a significant impact on the recharge of the groundwater subbasin. Increased impervious

surfaces, such as asphalt, concrete, or structures, increase runoff and decrease recharge. Other land uses, such as irrigated agriculture where significant amounts of surface water are applied and outside the limits of the Corcoran Clay layer, may result in deep percolation and increased groundwater recharge.

- Depth to Groundwater: Depth to groundwater may limit recharge if groundwater is too close to the ground surface.

During the characterization process, any potential target aquifer(s) for future groundwater recharge will be identified and the potential for groundwater interactions resulting from the mixing of ambient groundwater with seasonally-available surplus treated surface water will be evaluated. Local hydrogeology, source water quality and other factors will be taken into consideration when making this determination. The aquifer recharge analysis will result in the identification of areas where both passive (surface percolation and land management) and direct (groundwater injection) recharge projects may occur in the subbasin. The developed recharge analysis must be adequate to geographically represent the natural and anthropogenic recharge areas within the management area. Refinements of the recharge areas within specific key areas within the basin may also be required as part of the analysis.

Also under this subtask, a comprehensive water quality evaluation will be performed for the groundwater subbasin. As groundwater is vulnerable to contamination, and as certain parts of the region are already taking wells out of service as a result of groundwater quality impacts, understanding the existing qualities of this important resource is important to mitigate for or avoid future quality impacts. As part of the evaluation, an investigation of the different types of water qualities and contaminants present in certain portions of the subbasin will be identified. Groundwater management strategies to control the occurrence and transport of the contaminants within the study area will be identified, both with and without potential groundwater augmentation/banking programs. Existing monitoring plan(s), comprised of existing wells or recommended new monitoring wells, will be identified and evaluated to identify a preferred basin-wide program to monitor groundwater quality, in addition to groundwater elevation monitoring currently underway. The installation of any recommended monitoring wells is not included as part of the proposed Project.

In general, the analysis will focus on areas within the subbasin where potential groundwater recharge would be viable. The aquifer hydrogeology characterization and recharge analysis will be summarized in a draft and final TM that includes, but is not limited to the following:

- Presentation of the conceptual basin model;
- Summary of potential aquifer recharge areas identified in the groundwater subbasin (including a preliminary analysis of potential geochemical interactions between ambient groundwater and treated surface water);
- Summary of water quality conditions within the study area and identification of major contaminants of concern;
- Identification of contaminated aquifers (source) and contaminant transport mechanisms;
- Groundwater management recommendations in order to minimize contaminant occurrence, and/or transport;
- Development of maps showing the natural, anthropogenic and potential recharge areas; and
- Development of maps showing the natural and anthropogenic contaminants of concern.

A meeting/webinar will be conducted following completion of the draft TM to present the findings of this task. The STRGBA and participating stakeholders will have the opportunity to provide comments on the TM prior to finalization.

***Task 5 Deliverables:** Draft and Final Aquifer Characterization and Recharge Analysis TM; Five (5) 24x36 maps showing potential recharge areas; Five (5) 24x36 maps showing contaminants of concern areas; Meeting agenda, presentation and minutes (to review the findings).*

Task 6: Project and Opportunity Identification and Prioritization

This task will identify various studies, projects and/or programs that could potentially be included in the IGMAP. Solutions for basin management, including opportunities to augment local groundwater supplies with seasonally-available surplus treated surface water and to improve water quality through targeted programs will be identified, along with the intended aquifers for recharge. Agencies in California that have been permitted to implement or are already implementing recharge projects will be identified, along with their project milestones, obstacles, and accomplishments, including their general methods of aquifer recharge, to provide ideas and guidance for project development.

The following information will be prepared, as appropriate, for each of the studies, projects, and/or programs identified as part of this task:

- A description of the study, project, and/or program, including the benefits achieved by the project as it relates to the basin-wide vision for basin management;
- The hydrogeologic setting for the project (site-specific as data allows);
- A summary of recommended facilities;
- A description of any evaluated or recommended water management scenarios;
- An evaluation of the study/project/program benefits and impacts;
- Any foreseen environmental, legal, and engineering matters that may be present (including permitting challenges);
- Preliminary planning-level cost estimates; and
- Recommendations for next steps and/or future testing in support of the Project.

The studies, projects and programs identified above will then be prioritized using the methodology developed under Task 4 to both identify key areas and projects to be targeted to meet groundwater management and Project objectives while providing groundwater augmentation and/or water quality benefits. Identified projects will be submitted for inclusion in the East Stanislaus IRWMP as separate projects for prioritization within the goals and objectives of that plan, and will be summarized in the future update of the Modesto Subbasin IRGMP.

Potential institutional arrangements (i.e. MOUs) for these projects will be identified and developed, as budget allows, to form the basis for coordinated groundwater management planning as well as provide a funding stream for projects identified through this and ongoing groundwater-related planning efforts. For budgeting purposes, it was assumed that up to five groundwater management / augmentation projects will be developed and analyzed.

***Task 6 Deliverables:** Draft and final TM describing the studies, projects and/or programs identified and the prioritization of those studies, projects and/or programs.*

Task 7: Prepare Integrated Groundwater Management and Augmentation Plan

Draft and final Integrated Groundwater Management and Augmentation Plans (IGMAPs) will be prepared using the various technical memoranda developed, along with other deliverables completed in Tasks 2 through 6. This plan will include, but is not limited to, the following information:

- A summary of the status of the Modesto Subbasin , including description of the groundwater subbasin conceptual model and a summary of basin-wide groundwater quality;
- Updated basin management goals and objectives, and identification of needs with regards to groundwater management and groundwater augmentation;
- A basin-wide vision for achieving effective groundwater management while securing other benefits, including, but not limited to, groundwater augmentation, water quality improvements and/or protection, and enhancement of local environmental resources;
- Potential studies, projects and/or programs that could be implemented to help achieve the program's vision for integrated groundwater management;
- Recommendations for future studies, analysis, testing, monitoring, and demonstration projects.

An administrative draft IGMAP will be prepared for review and comment by participating stakeholders, including the STRGBA. A conference call/webinar will be conducted to discuss the administrative draft IGMAP, answer questions and solicit comments. Pertinent comments received will be incorporated into the IGMAP to prepare a public draft version for release; this version will be made available to stakeholders and the public electronically through the STRGBA and ESIRWMP websites. Comments from the public will be compiled and addressed in the final IGMAP. The identified opportunities, studies, projects, and programs included in the IGMAP will be incorporated into the next update to the STRGBA's IRGMP and will be submitted for inclusion in the East Stanislaus IRWMP to help further solutions for regional water supply reliability and drought preparedness.

Task 7 Deliverables: Administrative Draft, Public Draft, and Final Integrated Groundwater Management and Augmentation Plan; meeting agenda and notes.